



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,940	06/27/2003	Martin Sansing	SANMA.001A	8671
20995	7590	10/04/2005	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			FERNSTROM, KURT	
2040 MAIN STREET			ART UNIT	PAPER NUMBER
FOURTEENTH FLOOR				
IRVINE, CA 92614			3714	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

TWC

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/607,940	SANSING, MARTIN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kurt Fernstrom	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 July 2005 and 14 September 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) See Continuation Sheet is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1-8, 10-12, 16, 20-27 and 71 is/are allowed.
- 6) Claim(s) 29-32, 34-38, 40-45, 47-50, 54-62, 64, 65, 67-70 and 72 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

**Continuation of Disposition of Claims:** Claims pending in the application are 1-8,10-12,16,20-27,29-32,34-38,40-45,47-50,54-62,64,65 and 67-72.

## **DETAILED ACTION**

The indicated allowability of claims 29-31, 32, 64, 65, 67-70 and 72 are withdrawn, and new grounds of rejection are presented. Because new grounds of rejection are presented, this Action is made non-final. Rejections follow.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29-31, 64 and 65 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are written as method claims, but depend from apparatus claims 1 and 32. The claims are not directed to a "process" or a "machine", but rather overlap the categories. As written, 35 USC 101 recites the four categories of statutory subject matter in the alternative only, and thus subject matter which overlaps the categories does not fall within the categories of patentable subject matter. See MPEP 2173.05(p).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 29-31, 64 and 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As discussed above, it is not clear whether the claims are directed to a method, or an apparatus.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 32, 40, 48-50, 55 and 64-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Taylor. Taylor discloses a mathematics educational kit comprising an array of rows 36 and 38 having a plurality of receiving positions, a plurality of number pieces 1-12 associated with a plurality of numbers, each piece sized proportionally to the number it represents and configured to overlay a quantity of receiving positions on the array, where the receiving positions are labeled with numbers 46 which are disposed adjacent to the receiving positions. With respect to claim 40, lines within the rows of Taylor act as visual indicators. With respect to claims 48 and 49, the rows of Taylor are the same length, and have the same number of receiving positions therein. With respect to claim 50, Taylor discloses in Figure 1 a gap between the rows. With respect to claim 55, Taylor discloses in Figure 1 a numerical label associated with each

row. With respect to claims 64 and 65, Taylor discloses that pieces are placed in the array to demonstrate principles of addition and subtraction.

Claims 67 and 72 are rejected under 35 U.S.C. 102(b) as being anticipated by House. House discloses a mathematics educational kit comprising an array of rows each having ten receiving positions, a plurality of number pieces, each associated with a number one through ten and sized proportionally to the number it represents and configured to overlay a quantity of receiving positions on the array. House further discloses in column 4, lines 24-30 that the pieces are configured to engage the base array via Velcro, which is a removable fastener system. The Velcro of House is an audible indicator, as it inherently creates a noise when the piece is attached and especially when it is removed.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Wanvig. Taylor discloses all of the limitations of the claim with the exception of the negative numbers. However, providing a math teaching apparatus having a base array of numbers comprising negative numbers is known, as disclosed for example in

Figure 11 of Wanvig. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing negative numbers on the array for the purpose of teaching a user about concepts relating to negative numbers.

Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Woldenberg. Walker discloses all of the limitations of the claims with the exception of the use of fractions and decimals on the pieces. However, such a feature is known, as disclosed for example in column 3, lines 13-15 of Taylor. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing pieces representing decimals and fractions for the purpose of teaching a user about the related concepts.

Claims 38 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor. Taylor discloses all of the limitations of the claim with the exception of the number labels being painted. Rather, Taylor is silent as to how the numbers are provided on the device. However, painting is a very well known means of providing indicia on a device, and is considered to be obvious in light of the disclosure of Taylor as a means of providing numerical indicia. Taylor discloses all of the limitations of claim 43 with the exception of the instructions. However, Official Notice is taken that instructions are a well known component of educational device, and would have been an obvious way to show the user how to use the device. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing instructions for the purpose of allowing a user to understand how to use the device.

Claims 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Walker. Taylor discloses all of the limitations of the claim with the exception of the array and pieces being two dimensional. However, this feature is well known, as disclosed for example by Walker. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing a two dimensional array and pieces for the purpose of providing a device which can easily be used to demonstrate mathematical concepts.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of De La Rosa. Taylor discloses all of the limitations of the claims with the exception of the vertical orientation of the base array. However, vertically oriented math teaching devices are known, as shown for example in De La Rosa. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing a vertical orientation for the purpose of allowing a user to demonstrate the device to a group of learners.

Claims 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of House. Taylor discloses all of the limitations of the claims with the exception of the removable fastener system and the magnets. However, fasteners such as Velcro and magnets are a well known means of attaching pieces to a base, as shown for example in column 4, lines 24-30 of House. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing Velcro fasteners or magnets for the purpose of allowing a user to removably attach the pieces to the array.

Claims 54-and 56-59 and 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Harte. Taylor discloses all of the limitations of claims 54 and 62 with the exception of the columns on the array. Harte discloses in Figures 1, 3, 17 and 18 and in the specification a math teaching device comprising a base array for receiving pieces where the array comprises rows and columns which are labeled with numbers. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing the columns on the array as claimed for the purpose of allowing a user to place pieces on the array in a greater variety of ways. Taylor further discloses all of the limitations of claims 23, 35, 36 and 56-59 with the exception of the recesses and raised portions in the pieces and array to allow for stacking of the pieces. Harte discloses in Figures 36-38 and in the specification a math teaching device comprising a base array for receiving pieces where the array and pieces have various raised and recessed portions which allow a user to stack the pieces on top of each other. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing raised and recessed portions as claimed for the purpose of allowing a user to more easily align the pieces with the array, and also to allow a user to stack the pieces. Taylor discloses all of the limitations of claim 61 with the exception of the claimed number of rows. Harte discloses in Figures 1, 3, 17 and 18 and in the specification a math teaching device comprising a base array for receiving pieces where the array comprises ten rows. It would have been obvious to one of ordinary skill in the relevant art to modify the device

disclosed by Taylor by providing ten rows on the array as claimed for the purpose of allowing a user to place pieces on the array in a greater variety of ways.

Claims 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Weiss. Taylor discloses all of the limitations of the claims with the exception of the label having numbers thereon. It is well known to use marked labels as an alternative to printing or painting indicia directly on a surface, as disclosed for example in column 14, lines 19-21 of Weiss. It would have been obvious to one of ordinary skill in the relevant art to modify the device disclosed by Taylor by providing marked labels for the purpose of providing a convenient way to affix numbers to the device.

#### ***Allowable Subject Matter***

Claims 1-8, 10-12, 16, 20-27 and 71 are allowed.

Claims 29-31 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

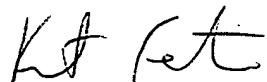
These claims remain allowable because there is no suggestion of a device as claimed comprising a removable label, which allows a user to easily change the numbers being presented for teaching. With respect to claim 71, the language "can be removably attached" is interpreted as meaning that the labels are physically capable of being removably attached, not that the labels are optionally attached. The claims rejected above do not recite that the labeled numbers are removable from the array.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kurt Fernstrom whose telephone number is (571) 272-4422. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanda Harris can be reached on (571) 272-4448. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KF  
September 29, 2005

**KURT FERNSTROM  
PRIMARY EXAMINER**